

IMPERIAL COUNTY AIR POLLUTION CONTROL DISTRICT

RULE 424 - ARCHITECTURAL COATINGS

(Adopted 11/9/82; revised 9/14/99; 01/11/2005)

A. Applicability

Except as provided in subsection A.1, this rule is applicable to any person who supplies, sells, offers for sale, or manufactures any architectural coating for use within the District, as well as any person who applies or solicits the application of any architectural coating within the District. Terms applicable to this rule are defined in Rule 101 - Definitions.

A.1 Exemptions

The requirements of this rule do not apply to:

- A.1.a Any architectural coatings that is sold or manufactured for use outside of the District or for shipment to other manufacturers for reformulation or repackaging.
- A.1.b Any aerosol coating product
- A.1.c Any architectural coating that is sold in a container with a volume of one liter (1.057 quart) or less.

B. Standards

- B.1 **VOC Content Limits:** Except as provided in subsections B.2, B.3, and B.8, no person shall: (i) manufacture, blend, or repackage for sale within the district; (ii) supply, sell, or offer for sale within the district; or (iii) solicit for application or apply within the district, any architectural coating with a VOC content in excess of the corresponding limit specified in Table 424-1, after the specified effective date in Table 424-1.

TABLE 424-1

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Table of Architectural Coating Standards (grams of VOC per liter of Coating as applied, less water and Exempt Compound and excluding any colorant added to tint bases)	
Coating Category	Effective 05/01/2005
Flat Coatings	100
Nonflat Coatings	150
Nonflat-High Gloss Coatings	250
Specialty Coating	
Antenna Coatings	530
Antifouling Coatings	400
Bituminous Roof Coatings	300
Bituminous Roof Primers	350
Bond Breakers	350
Clear Wood Coatings	
Clear Brushing Lacquers	680
Varnishes	350
Sanding Sealers (other than lacquer sanding sealers)	350
Lacquers (including lacquer sanding sealers)	550
Concrete Curing Compounds	350
Dry Fog Coatings	400
Faux Finishing Coatings	350
Fire Resistive Coatings	350
Fire Retardant Coatings	
Clear	650
Opaque	350
Floor Coatings	250
Flow Coatings	420
Form Release Compounds	250
Graphic Arts (Sign) Coatings	500
High Temperature Coatings	420
Industrial Maintenance Coatings	250
Low Solids Coatings ^b	120
Magnesite Cement Coatings	450
Mastic Texture Coatings	300
Metallic Pigmented Coatings	500
Multi-Color Coatings	250
Pre-treatment Wash Primers	420
Primers Sealers & Undercoaters	200

Quick-Dry Enamels	250
Quick-Dry Primers, Sealers, and Undercoaters	200
Recycled Coatings	250
Roof Coatings	250
Rust Preventative Coatings	400
Shellac	
Clear	730
Opaque	550
Specialty Primers, Sealers, and Undercoaters	350
Stains	250
Swimming Pool Coatings	340
Swimming Pool Repair and Maintenance Coatings	340
Temperature-Indicator Safety Coatings	550
Traffic Marking Coatings	150
Waterproofing Sealers	250
Waterproofing Concrete/Masonry Sealers	400
Wood Preservatives	350

b units are grams of VOC per liter (pounds of VOC per gallon) of coating, including water and exempt compounds.

B.2 Most Restrictive VOC Limit: If anywhere on the container of any architectural coating, or any label or sticker affixed to the container, or in any sales, advertising, or technical literature supplied by a manufacturer or anyone acting on their behalf, any representation is made that indicates that the coating meets the definition of or is recommended for use for more than one of the coating categories listed in Table 424-1, then the most restrictive VOC content limit shall apply. This provision does not apply to the coating categories specified in subsections B.2.a through B.2.o.

- B.2.a Antenna coatings
- B.2.b Antifouling coatings
- B.2.c Bituminous roof primers
- B.2.d Fire retardant coatings
- B.2.e Flow Coatings
- B.2.f High temperature coatings
- B.2.g Industrial maintenance coatings
- B.2.h Lacquer coatings (including lacquer sanding sealers)
- B.2.i Low solids coatings
- B.2.j Metallic pigmented coatings
- B.2.k Pretreatment was primers
- B.2.l Shellacs
- B.2.m Specialty primers, sealers, and undercoaters
- B.2.n Temperature indicator safety coatings
- B.2.o Wood preservatives

- B.3 **Sell-Through of Coatings:** A coating manufactured prior to the effective date specified for that coating in Table 424-1 may be sold, supplied, or offered for sale for up to three years after the specified effective date. In addition, a coating manufactured before the effective date specified for that coating in Table 424-1 may be applied at any time, both before and after the specified effective date, so long as the coating complied with the standards in effect at the time the coating was manufactured. This subsection B.3 does not apply to any coating that does not display the date or date-code required by subsections C.1.
- B.4 **Painting Practices:** All architectural coating containers used to apply the contents therein to a surface directly from the container by pouring, siphoning, brushing, rolling, padding, ragging or other means, shall be closed when not in use. These architectural coating containers include, but are not limited to, drums, buckets, cans, pails, trays or other application containers. Containers or any VOC containing materials used for thinning and cleanup shall also be closed when not in use.
- B.5 **Thinning:** No person who applies or solicits the application of any architectural coating shall apply a coating that is thinned to exceed the applicable VOC limit specified in Table 424-1.
- B.6 **Rust Preventative Coatings:** Effective upon adoption of this rule, a person shall only apply or solicit the application of a rust preventative coating for non-industrial use, unless the rust preventative coating complies with the industrial maintenance coating VOC limit specified in Table 424-1.
- B.7 **Coatings Not Listed in Table 424-1:** For any coating that does not meet any of the definitions for the specialty coatings categories listed in Table 424-1, the VOC content limit shall be determined by classifying the coating as a flat coating or a nonflat coating, based on its gloss, as defined in Rule 101, definitions and the corresponding flat or nonflat VOC limit shall apply.
- B.8 **Lacquers:** Notwithstanding the provisions of subsection B.1, a person or facility may add up to 10 percent by volume of VOC to a lacquer to avoid blushing of the finish during days with relative humidity greater than 70 percent and temperature below 65°F, at the time of application, provided that the coating contains acetone and no more than 550 grams of VOC per liter of coating, less water and exempt compounds prior to the addition to VOC.

C. Container Labeling Requirements

Each manufacturer of any architectural coating subject to this rule shall display the information listed in sections C.1 through C.9 on the coating container (or label) in which the coating is sold or distributed.

- C.1 **Date Code:** The date the coating was manufactured, or a date code representing the

date, shall be indicated on the label, lid, or bottom of the container. If the manufacturer uses a date code for any coating, the manufacturer shall file an explanation of each code with the Executive Officer of the California Air Resources Board.

- C.2 **Thinning Recommendations:** A statement of the manufacturer's recommendation regarding thinning of the coating shall be indicated on the label or lid of the container. This requirement does not apply to the thinning of architectural coatings with water. If thinning of the coating prior to use is not necessary, the recommendation must specify that the coating is to be applied without thinning.
- C.3 **VOC Content:** Each container of any coating subject to this rule shall display either the maximum or the actual VOC content of the coating, as supplied, including the maximum thinning as recommended by the manufacturer. VOC content shall be displayed in grams of VOC per liter of coating. VOC content displayed shall be calculated using product formulation data, or shall be determined using the test methods in section D.3. The equation in section D.2 shall be used to calculate VOC content.
- C.4 **Industrial Maintenance Coatings:** In addition to the information specified in section C.1, C.2, and C.3 each manufacturer of any industrial maintenance coating subject to this rule shall display on the label or lid of the container in which the coating is sold or distributed one or more of the descriptions listed below:
 - C.4.1 "For industrial use only."
 - C.4.2 "For professional use only."
 - C.4.3 "Not for residential use" or "Not intended for residential use."
- C.5 **Clear Brushing Lacquers:** Effective three months after adoption of this rule, the labels of all clear brushing lacquers shall prominently display the statements "For brush application only," and "This product must not be thinned or sprayed."
- C.6 **Rust Preventative Coatings:** Effective three months after adoption of this rule, the labels of all rust preventative coatings shall prominently display the statement "For Metal Substrates Only."
- C.7 **Specialty Primers, Sealers, and Undercoaters:** Effective three months after adoption of this rule, the labels of all specialty primers, sealers, and undercoaters shall prominently display one or more of the descriptions listed below:
 - C.7.1 For blocking stains
 - C.7.2 For fire-damaged substrates
 - C.7.3 For smoke-damaged substrates
 - C.7.4 For water-damaged substrates
 - C.7.5 For excessively chalky substrates

- C.8 **Quick Dry Enamels:** Effective three months after adoption of this rule, the labels of all quick dry enamels shall prominently display the words “Quick Dry” and the dry hard time.
- C.9 **Nonflat - High Gloss Coatings:** Effective three months after adoption of this rule, the labels of all nonflat - high gloss coatings shall prominently display the words “High Gloss.”

D. Compliance Provisions and Test Methods

D.1 **Calculation of VOC Content:** for the purpose of determining compliance with the VOC content limits in Table 424-1, the VOC content of a coating shall be determined by using the procedures described in D.2. The VOC content of a tint base shall be determined without colorant that is added after the tint base is manufactured.

D.2 Calculation for the determination of VOC content per volume of coating:

D.2.a With the exception of low solids coatings, determine the VOC content in grams of VOC per liter of coating thinned to the manufacturer’s maximum recommendation, excluding the volume of any water and exempt compounds. Determine the VOC content using equation 1 as follows:

$$(1) \quad \text{VOC Content} = \frac{(W_s - W_w - W_{ec})}{(V_m - V_w - V_{ec})}$$

Where:

VOC Content = grams of VOC per liter of coating

W_s = weight of volatiles, in grams

W_w = weight of water, in grams

W_{ec} = weight of exempt compounds, in grams

V_m = volume of coating, in liters

V_w = volume of water, in liters

V_{ec} = volume of exempt compounds, in liters

D.2.b For low solids coatings, determine the VOC content in units of grams of VOC per liter of coating thinned to the manufacturer’s maximum recommendation, including the volume of any water and exempt compounds. Determine the VOC content using equation 2 as follows:

$$(2) \quad \text{VOC Content}_1 = \frac{(W_s - W_w - W_{ec})}{V_m}$$

Where:

VOC Content_1 = the VOC content of a low solids coating in grams of VOC per liter of coating

W_s = weight of volatiles, in grams

W_w = weight of water, in grams

W_{ec} = weight of exempt compounds, in grams

V_m = volume of coating, in liters

- D.3 **VOC Content of Coatings:** To determine the physical properties of a coating in order to perform the calculations in subsection D.2.a, the reference method for VOC content is U.S. EPA Method 24, incorporated by reference in subsection D.6.11, except as provided in subsections D.4 and D.5. An alternative method to determine the VOC content of coatings is SCAQMD Method 304-91 (Revised February 1996), incorporated by reference in subsection D.6.12. The exempt compounds content shall be determined by SCAQMD Method 303-91 (Revised August 1996), incorporated by reference in subsection D.6.10. To determine the VOC content of a coating, the manufacturer may use U.S. EPA Method 24, or an alternative method as provided in section D.4, formulation data, or any other reasonable means for predicting that the coating has been formulated as intended (e.g., quality assurance checks, recordkeeping). However, if there are any inconsistencies between the results of a Method 24 test and any other means for determining VOC content, the Method 24 test results will govern, except when an alternative method is approved as specified in section D.4. The District Air Pollution Control Officer (APCO) may require the manufacturer to conduct a Method 24 analysis.
- D.4 **Alternative Test Methods:** Other test methods demonstrated to provide results that are acceptable for purposes of determining compliance with section D.3, after review and approved in writing by the staffs of the District, the ARB, and the U.S. EPA, may also be used.
- D.5 **Methacrylate Traffic Marking Coatings:** Analysis of methacrylate multicomponent coatings used as traffic marking coatings shall be conducted according to a modification of U.S. EPA Method 24 (40 CFR 59, subpart D, Appendix A), incorporated by reference in subsection D.6.m. This method has not been approved for methacrylate multicomponent coatings used for other purposes than as traffic marking coatings or for other classes of multicomponent coatings.
- D.6 **Test Methods:** The following test methods are incorporated by reference herein, and shall be used to test coatings subject to the provisions of this rule.
- D.6.a **Flame Spread Index:** The flame spread index of a fire-retardant coating shall be determined by ASTM Designation E 84-99, "Standard Test Method for Surface Burning Characteristics of Building Materials" (see rule 101 Fire-Retardant Coating).
- D.6.b **Fire Resistance Rating:** The fire resistance rating of a fire-resistive coating shall be determined by ASTM Designation E 119-98, "Standard Test Methods for Fire Tests of Building Construction Materials" (see rule 101, Fire-Resistive Coating).
- D.6.c **Gloss Determination:** The gloss of a coating shall be determined by ASTM Designation D 523-89 (1999). "Standard Test Method for Specular Gloss"(see rule 101, Flat Coating, Nonflat Coating, Nonflat - High Gloss Coating and Quick-Dry Enamel).
- D.6.d **Metal Content of Coatings:** The metallic content of a coating shall be determined by SCAQMD Method 318-95, "Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction," *SCAQMD Laboratory Methods of Analysis for Enforcement Samples* (see rule 101, Metallic Pigmented Coating).

- D.6.e **Acid Content of Coatings:** The acid content of a coating shall be determined by ASTM Designation D 1613-96, "Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products" (see rule 101, Pre-treatment Wash Primer).
- D.6.f **Drying Times:** The set-to-touch, dry-hard, dry-to-touch, and dry-to-recoat times of a coating shall be determined by ASTM Designation D 1640-95, "Standard Test Methods for Drying, Curing, or Film Formation of Organic Coatings at Room Temperature" (see rule 101, Quick-Dry Enamel and Quick-Dry Primer, Sealer, and Undercoater). The tack-free time of a quick-dry enamel coating shall be determined by the Mechanical Test Method of ASTM Designation D 1640-95.
- D.6.g **Surface Chalkiness:** The chalkiness of a surface shall be determined using ASTM Designation D4214-98, "Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films" (see rule 101, Specialty Primer, Sealer, and Undercoater).
- D.6.h **Exempt Compounds-Siloxanes:** Exempt compounds that are cyclic, branched, or linear completely methylated siloxanes, shall be analyzed as exempt compounds for compliance with section 6 by BAAQMD Method 43, "Determination of Volatile Methylsiloxanes in Solvent-Based Coatings, Inks, and Related Materials," BAAQMD Manual of Procedures, Volume III, adopted 11/6/96 (see rule 101, Volatile Organic Compound, and section D.3)
- D.6.i **Exempt Compounds-Parachlorobenzotrifluoride (PCBTF):** The exempt compound parachlorobenzotrifluoride, shall be analyzed as an exempt compound for compliance with section 6 by BAAQMD Method 41, "Determination of Volatile Organic Compounds in Solvent Based Coatings and Related Materials Containing Parachlorobenzotrifluoride." BAAQMD Manual of Procedures, volume III, adopted 12/20/95 (see rule 101, Volatile Organic Compound, and section D.3.)
- D.6.j **Exempt Compounds:** The content of compounds exempt under U.S. EPA Method 24 shall be analyzed by SCAQMD Method 303-91 (Revised 1993), "Determination of Exempt Compounds," (SCAQMD Laboratory Methods of Analysis for Enforcement Samples (see rule 101, Volatile Organic Compound, and section D.3)
- D.6.k **VOC Content of Coatings:** The VOC content of a coating shall be determined by U.S. EPA Method 24 as it exists in appendix A of 40 *Code of Federal Regulations* (CFR) part 60, "Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings" (see section D.3)
- D.6.l **Alternative VOC Content of Coatings:** The VOC content of coatings may be analyzed either by U.S. EPA Method 24 or SCAQMD Method 304-91 (Revised 1996), "Determination of Volatile Organic Compounds (VOC) in Various Materials," SCAQMD Laboratory Methods of Analysis for Enforcement Samples (see section D.3)
- D.6.m **Methacrylate Traffic Marking Coatings:** The VOC content of methacrylate multicomponent coatings used as traffic marking coatings shall be analyzed by the procedures in 40 CFR part 59, subpart D, appendix A, "Determination of Volatile

Matter Content of Methacrylate Multicomponent Coatings Used as Traffic Marking Coatings" (September 11, 1998) (see section D.5).

E. Reporting Requirements

- E.1 **Clear Brushing Lacquers:** Each manufacturer of clear brushing lacquers shall, on or before April 1 of each calendar year, submit an annual report to the Executive Officer of the California Air Resources Board (ARB). The report shall specify the number of gallons of clear brushing lacquers sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.
- E.2 **Rust Preventative Coatings:** Each manufacturer of rust preventative coatings shall, on or before April 1 of each calendar year, submit an annual report to the Executive Officer of the ARB. The report shall specify the number of gallons of rust preventative coatings sold in the State during the preceding calendar year, and shall describe the method by the manufacturer to calculate State sales.
- E.3 **Specialty Primers, Sealer, and Undercoaters:** Each manufacturer of specialty primers, sealers, and undercoaters shall, on or before April 1 of each calendar year, submit an annual report to the Executive Officer of the ARB. The report shall specify the number of gallons of specialty primers, sealers, and undercoaters sold in the State during the preceding calendar years, and shall describe the method used by the manufacturer to calculate State sales.
- E.4 **Toxic Exempt Compounds:** For each architectural coating that contains perchloroethylene or methylene chloride, the manufacturer shall, on or before April 1 of each calendar year, report to the Executive Officer of the ARB the following information for products sold in the State during the preceding year.
- E.4.a the product brand name and a copy of the product label with legible usage instructions;
 - E.4.b the product category listed in Table 424-1 to which the coating belongs;
 - E.4.c the total sales in California during the calendar year to the nearest gallon;
 - E.4.d the volume percent, to the nearest 0.10 percent, of perchloroethylene and methylene chloride in the coating.
- E.5 **Recycled Coatings:** Manufacturers of recycled coatings must submit a letter to the Executive Officer of the ARB certifying their status as a Recycled Paint Manufacturer. The manufacturer shall, on or before April 1 of each calendar year, submit an annual report to the Executive Officer of the ARB. The report shall include, for all recycled coatings, the total number of gallons distributed in the State during the preceding year, and shall describe the method used by the manufacturer to calculate State distribution.
- E.6 **Bituminous Coatings:** Each manufacturer of bituminous roof coatings or bituminous rood primers shall, on or before April 1 of each calendar year, submit an annual report to the Executive Officer of the ARB. The report shall specify the number of gallons of bituminous roof coatings or bituminous roof primers sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.